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BIENNIAL REPORT 1961-1962

NEVADA DEPARTMENT OF HIGHWAYS

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KEITH LEE
State Controller



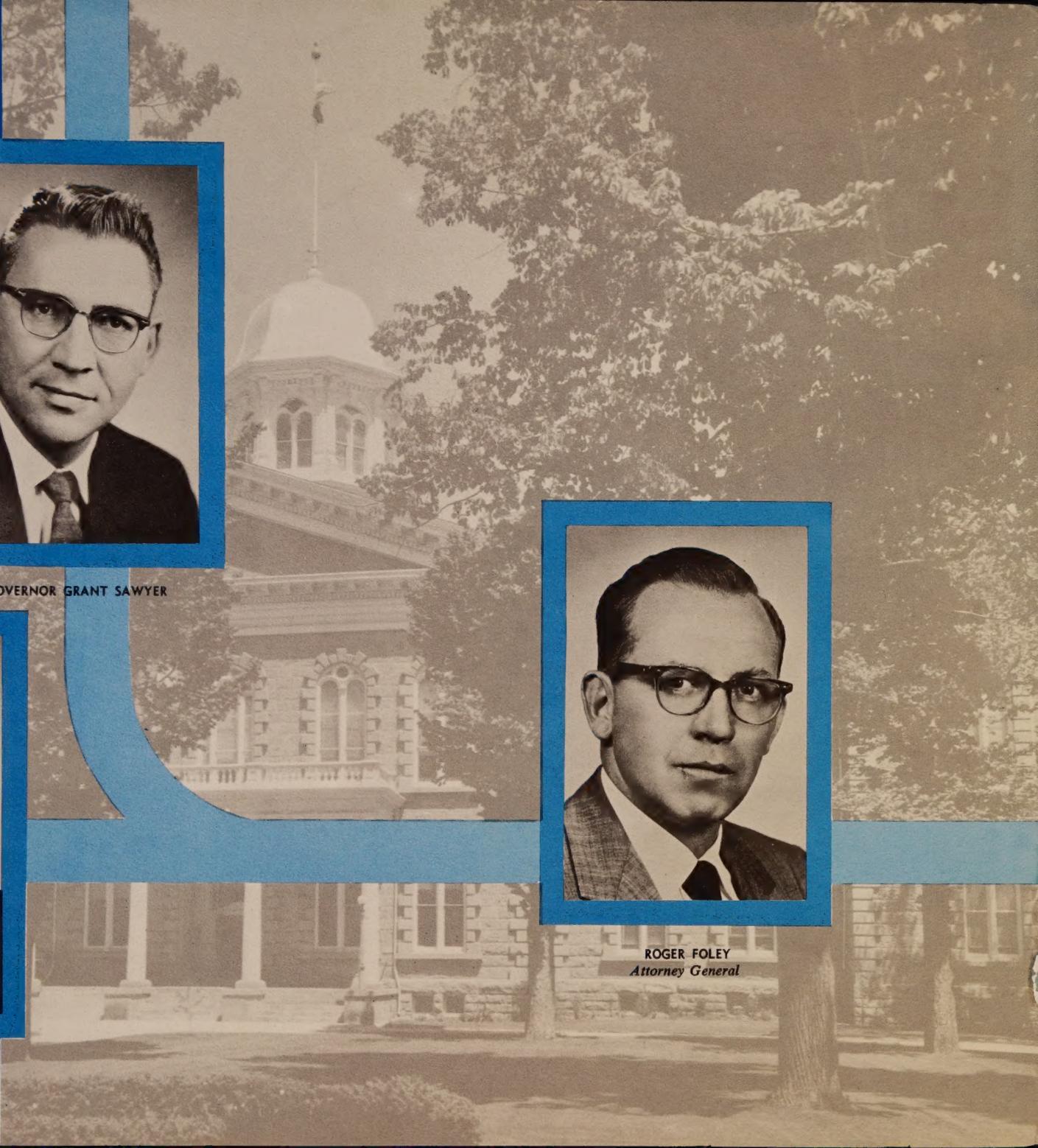
GOVERNOR GRANT SAWYER



KEITH LEE
State Controller

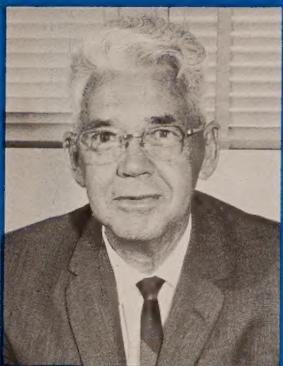


ROGER FOLEY
Attorney General





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W. O. WRIGHT
State Highway Engineer



R. E. ELDREDGE
Deputy Highway Engineer



JOHN E. BAWDEN
Deputy Highway Engineer



FOREWORD

This, the twenty-third biennial report of the Nevada Department of Highways, departs from the form followed in past years. I hope it will be the beginning of a series of readable and informative reports which will bring to you and the citizens of the State of Nevada an understandable story of what the Highway Department has accomplished during the biennial period.

With the tremendous growth and modernization of the highway program, I feel this type of report is needed to provide a clear picture of highway activity. Previous biennial reports have been of a more technical and statistical nature and frequently difficult for the general public to understand. However, the increase in public interest in our program demands that we supply the desired information in a more readable form.

The 1961 and 1962 fiscal years covered by this report have been peak years of accomplishment and growth for the Department. We believe, however, this is only the beginning of an era of unparalleled highway activity.

For those agencies and individuals requiring more detailed information, the Department is publishing a separate pamphlet containing the statistical tables included in former reports. We hope this new method of reporting meets with your approval.

W. O. WRIGHT,
State Highway Engineer.



THE NEVADA HIGHWAY PROGRAM 1961-1962

New concepts and new records marked the 1961-62 biennial period as one of the most unique in the Highway Department's history. With nearly all activity geared to the Interstate Freeway program, new highs were recorded in almost every field, and changes were made in everything from per diem forms to Department organization.

During the biennium, 42 contracts were awarded for the construction of 334 miles of new highway and the completion of two district offices and two maintenance facilities. The successful bids totaled a record-breaking \$38,462,483.

Electronic computing moved out of its primary role as an accounting tool into playing a major part in engineering procedures. The use of electronics also was extended to field surveying projects in the planning survey division. Both the design and right-of-way divisions were reorganized to more adequately handle the rapidly expanding road program.

For the first time construction planning was removed from its year-to-year basis and placed on a five-to-ten year schedule. With the vast amounts of funds involved, it

became evident that this change in programming methods was needed. Within the next ten years the Interstate Freeway program alone will exceed 183 million dollars, nearly as much as the total expended for all highway construction since the Department was founded in 1917.

In order to place secondary construction on a more realistic and equitable basis, the Department initiated a sufficiency study of all secondary routes in the state. Field personnel inspected the entire system to determine what roads needed immediate reconstruction, which sections would need rebuilding in the near future, and which highways were in proper condition to handle present traffic volumes and speeds.

From information obtained during this study, a program for secondary reconstruction was developed. Roads were given a sufficiency rating of bad, poor, fair or good based on the route's design, present condition, traffic, etc. In meetings with the various county commissioners, highway officials explained the study and its results on secondary planning, with emphasis on the need for setting aside a portion of the secondary budget for reconstruction. To

meet this need, the State Highway Engineer asked for and received concurrence from the counties to hold back 35 percent of the secondary funds for this purpose.

As during the 1959-60 biennial period, freeway activity led all other aspects of the program. The \$13,663,375 spent accounted for nearly one-half of the construction expenditures and over one-quarter of total Department expenses. At the same time, over 64 miles of new Interstate highway were opened to traffic and an additional 42 miles placed under contract.

An increase in construction cost was accompanied by an even greater rise in the cost of maintenance. With the increasing expense for labor and equipment, the cost of maintaining one mile of road rose from nearly \$900 in July 1960 to over \$1,100 in July 1962. In 1955, the figure was \$600, and in 1950, it was \$400 per mile.

In summary, the Highway Department in the 1961-62 biennial period moved rapidly forward in adapting its operations to the freeway program. In providing for the growing demand for better highways, the Department is modernizing its thinking, its methods, and its equipment.

Interstate activity during the 1961-62 biennium set new records as ten contracts costing \$23,189,842 were awarded. During the period, 64 miles of freeway were opened to traffic as an expenditure of \$13,663,375 was recorded for Interstate construction.

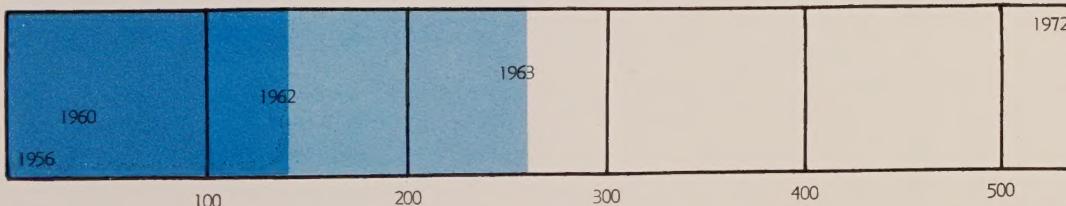
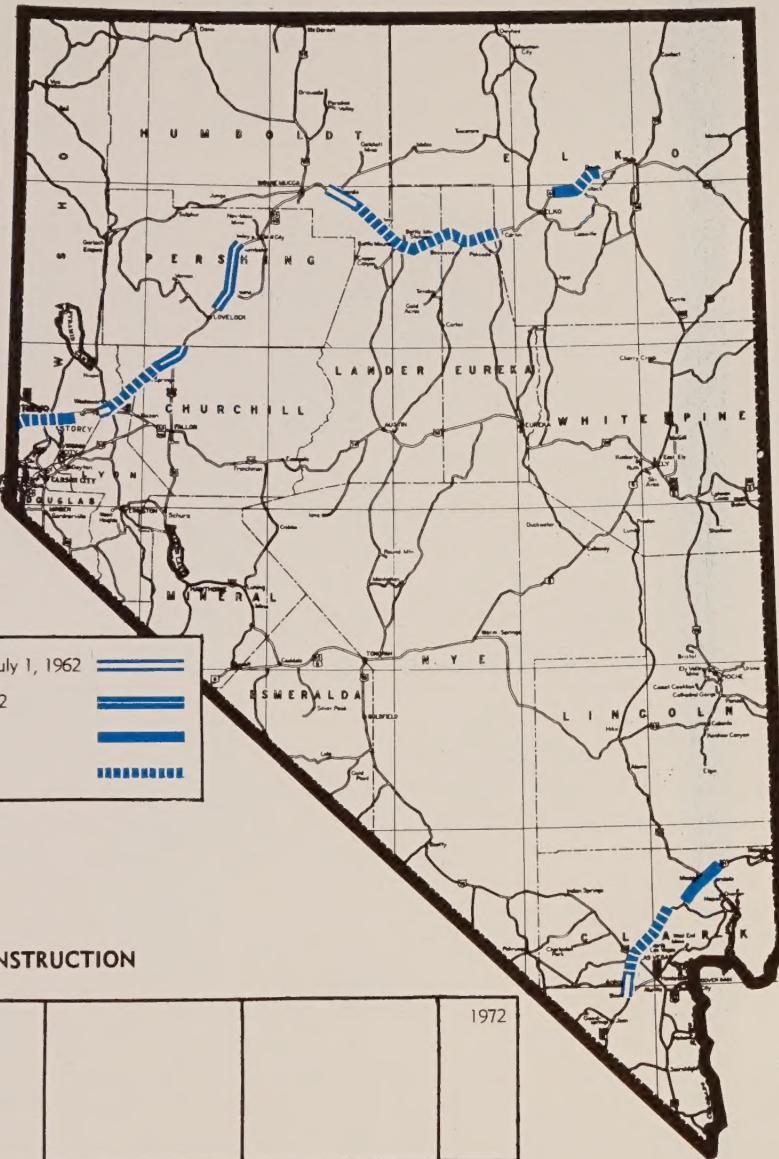
On Interstate 15 (U.S. 91) nearly 10 miles were added to the system at a cost of \$2,393,660. Of the 123.7 miles programmed for that route through southern Nevada, only 77 miles remain to be completed. In that total are two contracts underway northeast of Las Vegas. The 20 miles involved will cost \$5,284,200 to construct.

Progress on Interstate 80 (U.S. 40) across northern Nevada reached a new high: nine projects awarded and 40 miles of freeway placed in use. Another 36.9 miles was let for construction at a bid price of \$10,633,144. The remaining 340 miles needed to complete the route is now being planned or designed.

As of June 30, 1962 over 40 percent of the amount spent for all road construction during the biennial period was expended for freeways. Interstate projects also amounted to nearly 25 percent of all Department expenses.

The Highway Department anticipates even greater activity during the next two years. Now under design are 147 miles of Interstate roadway which will cost an estimated \$103,600,000 to construct. Nearly one-half of this work is scheduled for contract within the next two years.

INTERSTATE



NEW ROADS

COMPLETED July 1, 1960 to July 1, 1962

COMPLETED After July 1, 1962

UNDER CONSTRUCTION

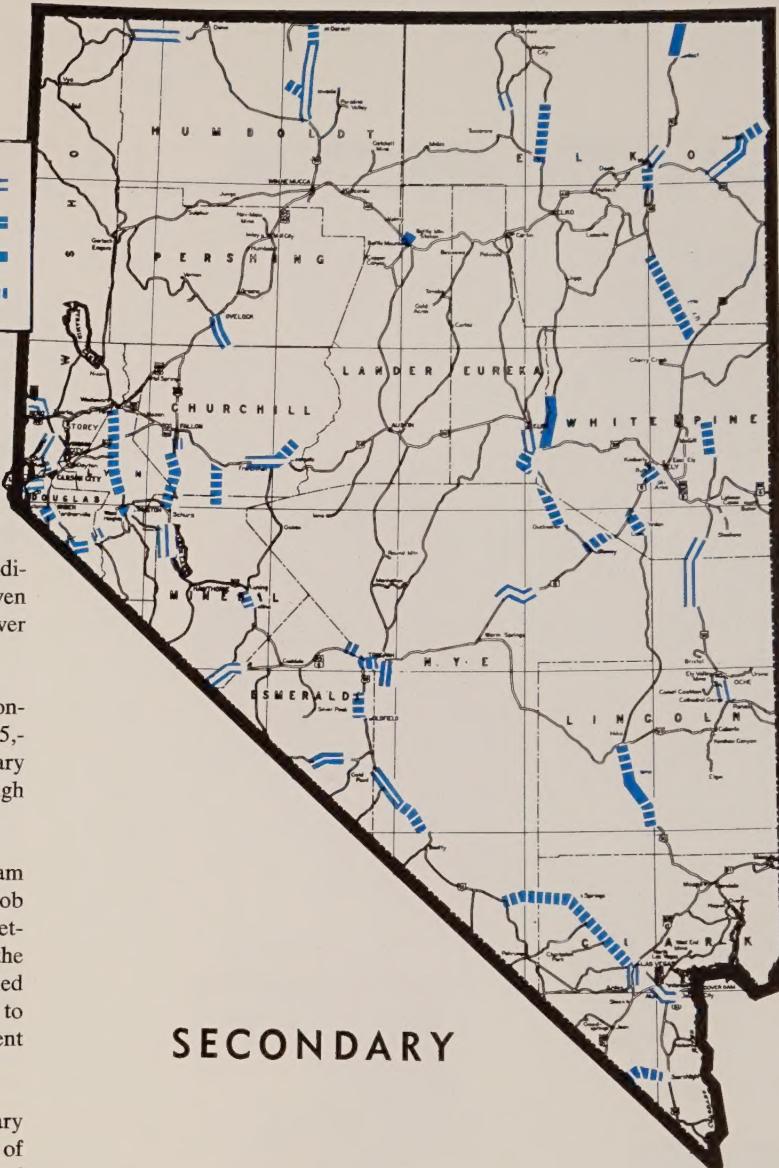
UNDER DESIGN

Secondary highways accounted for the expenditure of \$3,671,709 during the biennium. Seven contracts were completed, opening to traffic over 58 miles of new highway.

The Department awarded 11 contracts for construction of 121 miles of road at a cost of \$4,905,-645. Included was the state's largest secondary job to date: a 15-mile project on U.S. 93 through Alamo, costing \$1,432,331.

During the biennial period, the secondary program was placed on a five-year schedule, removing job planning from its former year-to-year basis. Meeting with county commissioners throughout the state, Highway Engineer W. O. Wright outlined proposed secondary activity for the next five to nine years. Under this plan, the Department anticipates expending over 31 million dollars.

On the design boards are 196 miles of secondary work, most of which is new road. At a cost of \$10,765,700, the projects involved are planned for completion or contract by 1965.



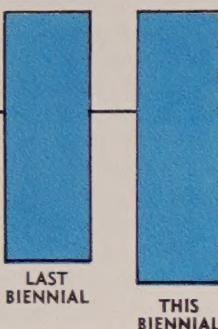
PRIMARY

Primary highway building reached a new high during the biennial period as 17 contracts were completed. At a cost of \$12,194,303 nearly 150 miles of new road were opened to the public. There was primary activity in 15 of the 17 counties. Work in Washoe County headed the list with \$2,365,400 expended, followed closely by Mineral County where \$2,210,600 were spent. Largest single job for the period was the completion of eight miles of four-lane highway from Reno north to Stead Air Force base for \$1,666,550.

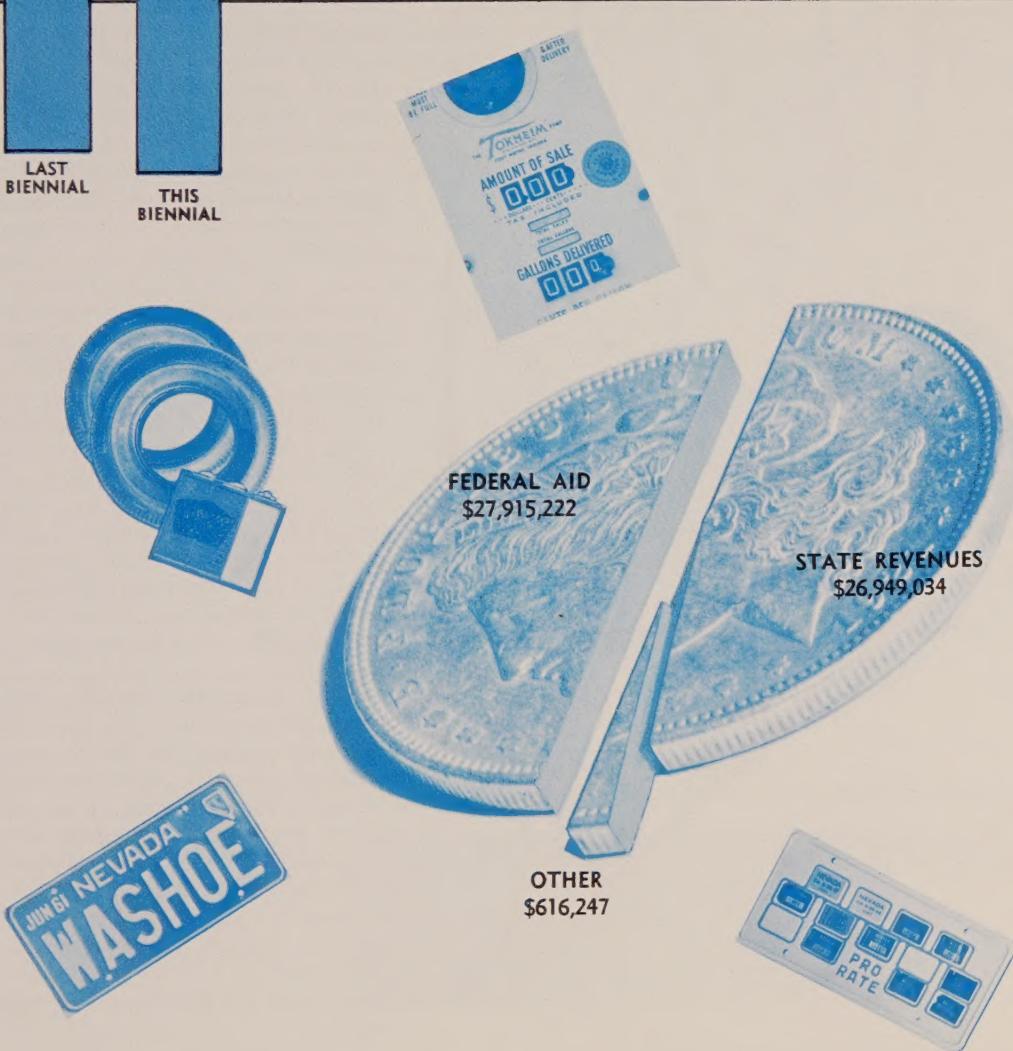
Counting only those jobs begun during the biennium, the Department completed eight of the 15 jobs awarded. The \$10,-350,000 in contracts let for bid called for construction of 120 miles of new primary highway, improving portions of U.S. 395, 95, 93, 50 and U.S. 6.

As of July 1, 1962, 250 miles of primary roads were under design with completion costs estimated to exceed \$24,646,000. Nearly all projects were programmed for contract within the next two years.

Despite the fact that this past biennial period was a record one for expenditures on primary construction, the Department anticipates spending twice this amount during the 1963-64 biennium. The major project planned for that period will be the completion of a new four-lane defense highway from Las Vegas to the Mercury test site. To be let under five separate contracts, the 59 miles will be constructed at a cost of \$10,000,000, under special Congressional appropriation.



INCOME



Income during the past biennium reached a new high as revenues increased 12 percent over the past biennial period. In the two years, \$55,480,503 was received by the Highway Department.

Receipts included \$27,915,222 in federal aid, \$26,511,445 from road user fees, \$437,589 from driver's license fees, and \$616,247 from miscellaneous state revenues. This income accounted for 16 percent of all revenue received by the Department since its inception in 1917.

Most of the increase occurred in income from state sources. State highway revenues rose 5.2 million dollars or 18 percent over the previous biennium. Federal aid increased only 1.5 million dollars or less than 6 percent.

More moneys were received from July 1, 1960 to July 1, 1962 than during the entire first twenty years of the Department's operation.

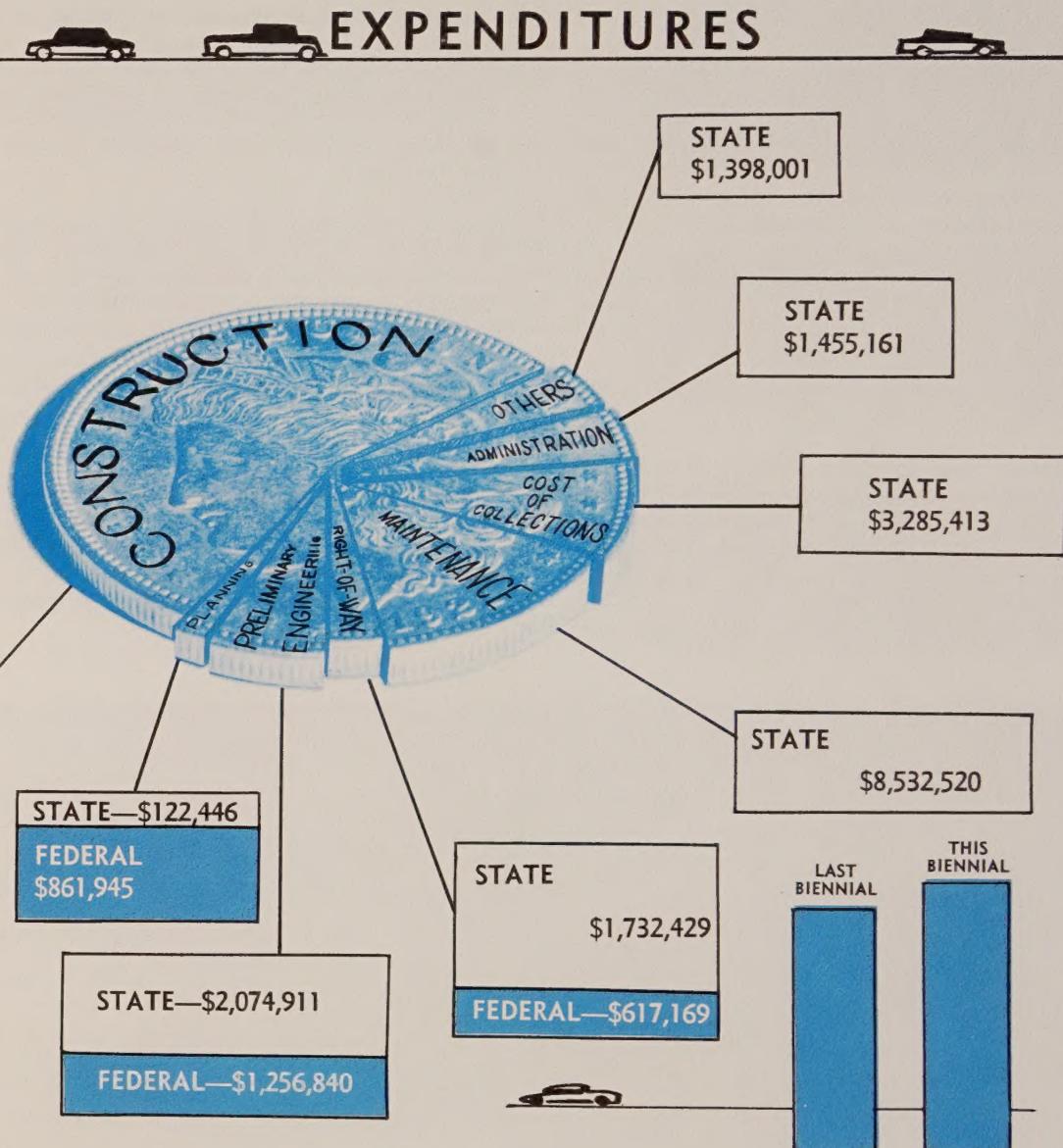
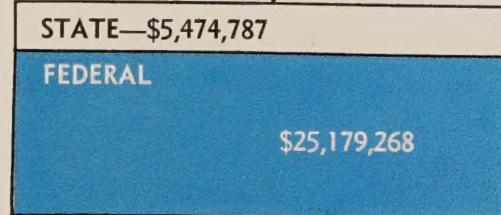
This tremendous growth of highway activity brought revision of the Department's accounting procedures. These changes culminated in the adoption of a concurrent audit program in cooperation with the federal Bureau of Public Roads. Under this new system, the Bureau now places more reliance on state highway accounting practices and internal financial controls, thereby allowing more immediate billing and federal reimbursement of funds expended on federal-aid projects. What used to take months can be accomplished within weeks since all costs are now billed on a monthly basis as the job proceeds rather than after the federal agency finishes a final audit of the completed project.

Expenditures reached a record level during the past two fiscal years with \$51,990,890 spent on all phases of the highway program. Nearly 60 percent of the total went for construction where \$30,654,055 was expended. Another \$8,532,520 was spent for maintenance, some 16 percent of the biennial expenditures. Preliminary engineering cost \$3,331,751 and right-of-way expenses amounted to \$2,349,598. All these operations but maintenance received federal aid.

Other expenses were paid for entirely with state funds. Included were the \$3,285,413 spent for collection costs, the \$1,455,161 for administration, and \$1,398,001 for miscellaneous items, including refunds.

Expenditures rose nearly 8 percent over the previous two-year period with the greatest increase noted in maintenance where costs climbed 14 percent over the 1959-60 period. During the biennium, spending of state funds for highway activity reached a new high. An increase was recorded of nearly two million dollars over the 21.3 million spent during the previous biennial period.

Expanding expenditure of state funds resulted in two major changes in the financing program. The counties were asked to secure needed right-of-way for new secondary construction. At the same time 35 percent of the secondary allocation was set aside for reconstruction, reducing use of state moneys for this activity.



PERSONNEL

GROWTH in the highway program over the past biennium is sharply reflected in the increased number of employees. Employment has risen nearly 20 percent in two years: in June 1960, 1,019 were on the payroll; as of June 1962, 1,292 were employed by the Department.

Practically all divisions and sections recorded increases in personnel. Field forces on construction jumped from 167 in 1960 to 296 in 1962 while those on maintenance rose from 405 to 479. Gains in employment also occurred in testing, design, and location.

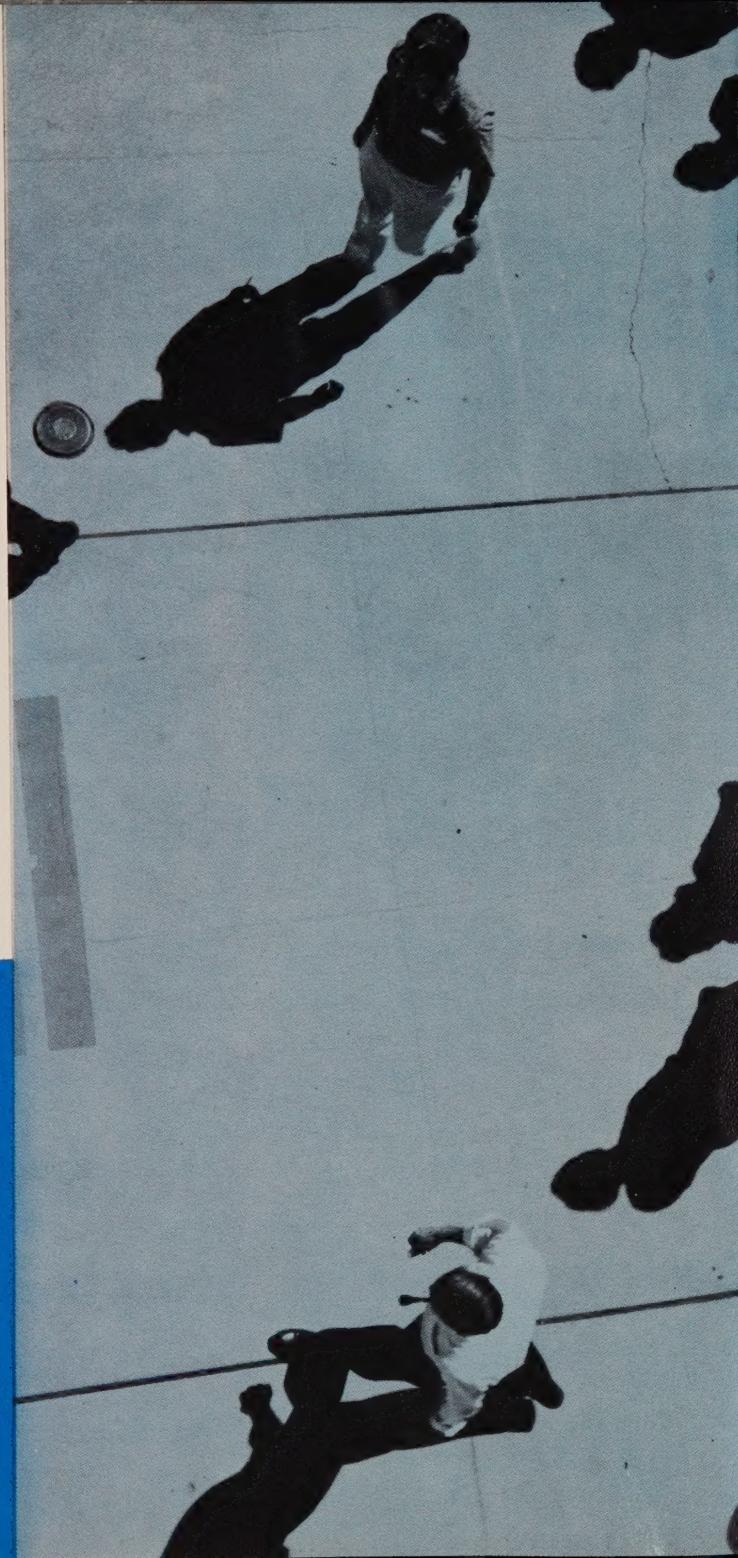
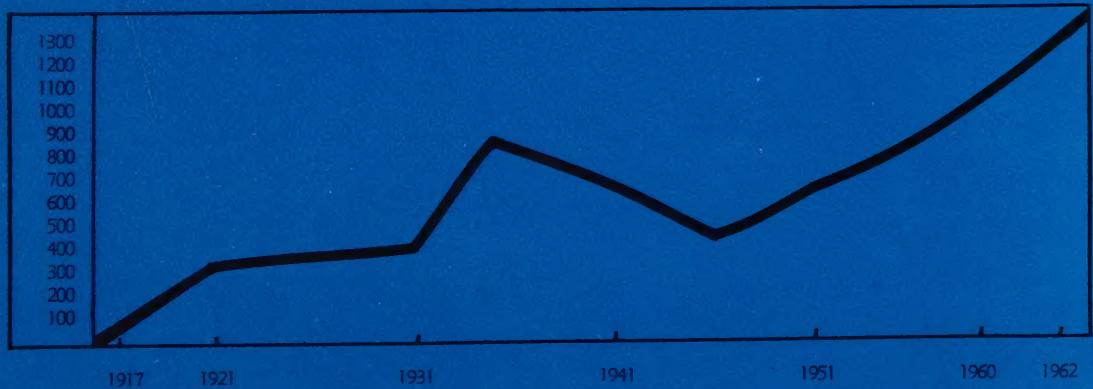
Despite these increases, shortages developed in skilled engineering positions. For the first time in the Department's history, a crash program was initiated to recruit resident engineers, instrument men, and construction inspectors. This drive was directed to qualified personnel, not only within Nevada, but within the entire western states' area.

Nearly two hundred replies were received in answer to display ads and news items placed in newspapers and construction magazines throughout the West.

Accompanying this need for additional personnel was the necessity for organizational changes. To more efficiently handle the increasing size and complexity of the highway program, the divisions of design, planning survey, testing, and construction were reorganized. At the same time many of the technical positions were upgraded in an effort to bring salaries more into line with those being offered in industry.

With the gain in employment came a shortage of space. To handle this problem and to provide for future growth the Department gave first priority during the biennial period to initiating plans for a new highway building. A contract for its design was awarded in June of this year.

EMPLOYEES THROUGH THE YEARS



DATA PROCESSING

During the past biennium, the data processing division underwent a major change in its methods of operation. In using its electronic computing equipment, the division shifted emphasis from the area of cost control and accounting to that of engineering. To handle complex construction and design problems, new computer equipment was installed.



ACCOUNTING

In managing the Department's bookkeeping and auditing activity, the accounting division made several significant changes in its operation during the biennial period. A new procedural manual was developed and put into use, the method of financial reporting was revised and a concurrent auditing program with the federal Bureau of Public Roads was initiated.



PERSONNEL

Operating under the administrative engineer, Personnel Officer Henry Clayton handled a growing variety of employee problems during the biennium. In addition to interviewing prospective employees, he worked with the State Personnel Department in recruiting needed construction and testing technicians. At the same time his duties were expanded to include classification studies and in-service training.



SAFETY

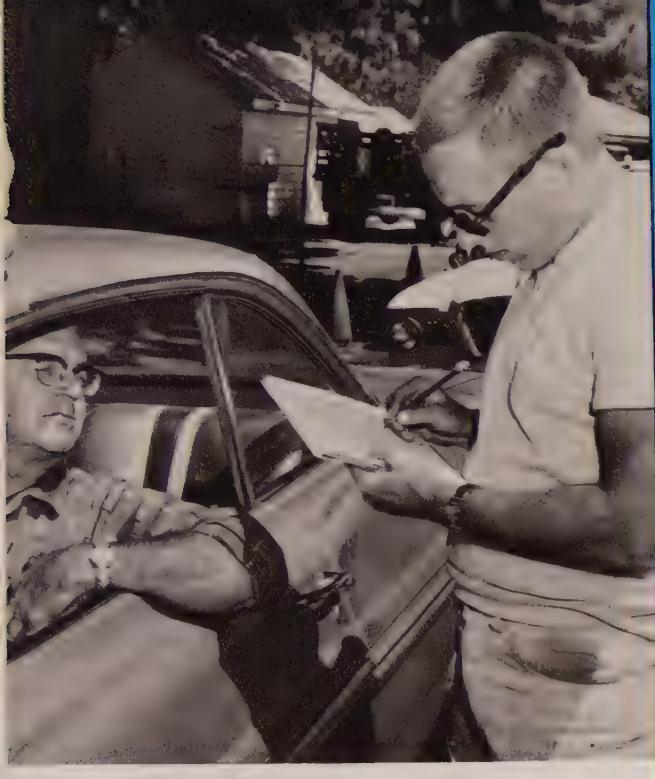
Accident prevention became only part of the job during the past two-year period as the safety program was expanded to include civil defense activity. For the first time, highway personnel were trained to handle CD radiation equipment as part of the statewide radiological monitoring program. First aid refresher courses were given field personnel and safety instruction by Director Joseph Moore emphasized the use of seat belts, safety glasses and other personal safeguards.



TRAINING

New emphasis on employee training during the biennium reflected the growing need by the Department of technically qualified personnel. During the period over 200 finished courses in highway technology and data processing as the first two years of a joint highway-university vocational program were completed. Plans are now underway to provide credit toward promotion for completion of such courses.





CONSTRUCTION BEGINS

PLANNING

Planning survey activity expanded greatly during the biennium, increasing its areas of operation from seven to nine; inventory of all state-interest roads, mapping, photogrammetry, geodesy (new), aerial reconnaissance (new), traffic, road life, financial, and special studies. Information gathered is for both current and historical use by the Department and various other public and private agencies. All preconstruction highway planning is based on the factual material obtained by the 58 people employed in this division.

ROAD DESIGN

In preparation of plans, estimates, and specifications for construction projects throughout the state, road design activity reached a new high during the past two fiscal years. The 42 projects designed and placed under contract called for completion of over 334 miles of highway at a cost exceeding \$38,000,000. To handle this tremendous program, changes were made in the organization of the design division and in its procedures. A new design manual was adopted setting forth the revised policies and standards.

BRIDGE DESIGN

Responsible for the design of bridges and interchanges, this division set a new record during the biennial period for projects planned and constructed. Activity was twice that of the previous biennium as 98 structures were completed at a cost of \$5,228,660. Emphasis was on the Interstate system where the use of consultants in design and the use of prestressed concrete in construction increased greatly over the past two years.

RIGHT OF WAY

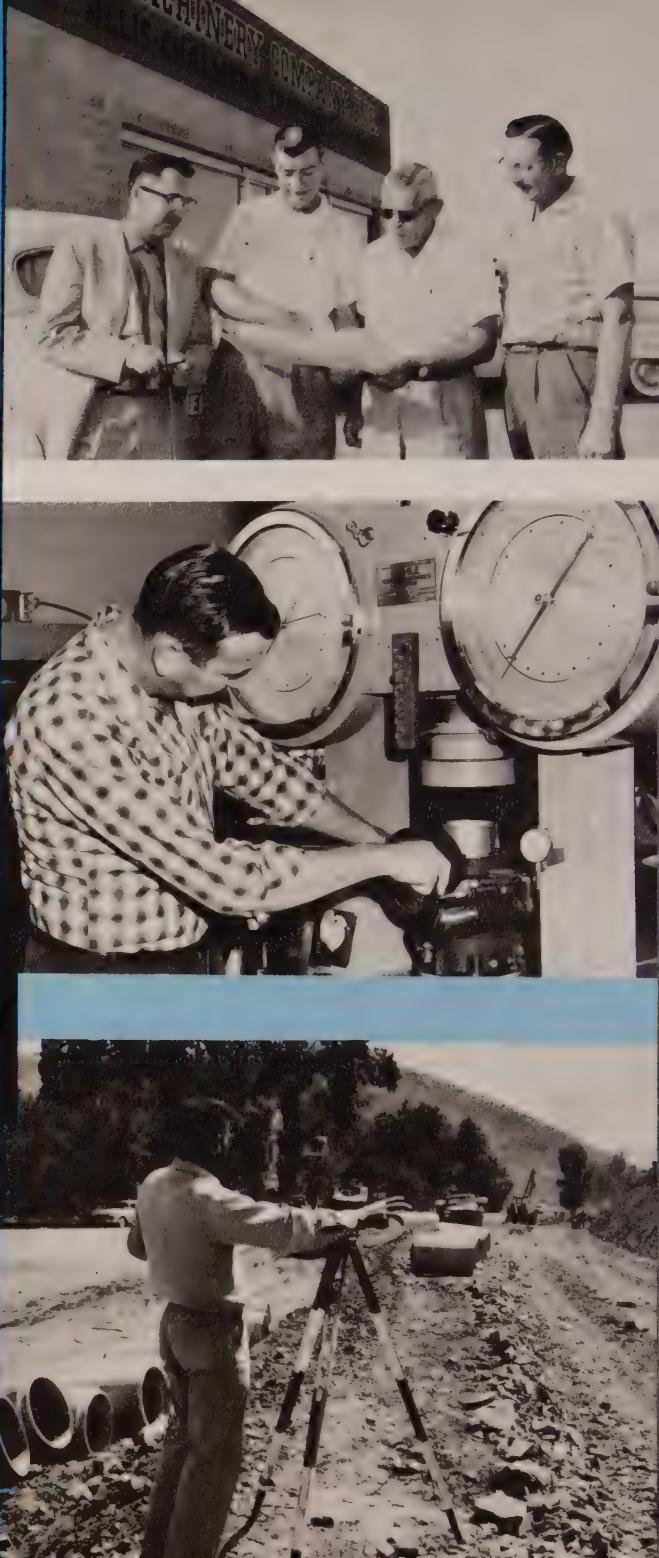
Acquisition of property and property rights, like most other highway activity during the biennium increased sharply over previous periods. Personnel rose from 39 as of July 1, 1960 to 47 as of July 1, 1962 with the staff of the Las Vegas office expanded from three to seven. Property settlements involved 321 separate parcels totaling over 19,000 acres of land, both private and public. Indicative of the growth in right-of-way activity was the expenditure of \$2,338,891 in the 1961-62 biennium compared to the \$1,789,301 spent during the previous period.

TESTING-MATERIALS

Direct result of the rapidly expanded road building program has been the sharp climb in testing activity. Since the last biennial period, the division has doubled its staff and tripled its work load. New emphasis has been given field testing and the collection of record samples on construction projects. Improved equipment has been installed in both the lab and in the field. In addition, the need for qualified field testers has resulted in a tremendous increase in on-the-job training of these technicians.

SURVEYS

Field crews on construction and location increased personnel from 189 in 1960 to 320 in 1962, reflecting the sharp upswing in highway activity during the past biennium. Two years ago there were 17 crews in the field; today there are 21. From July 1, 1960 through June 30, 1962, over 400 miles of new highway were located in 15 of the 17 counties and nearly 350 miles were surveyed and staked for construction.



MAINTENANCE and EQUIPMENT

Unusual weather, high traffic volumes and the addition of over 100 miles of freeway to the highway system made the 1961-62 biennium a record one for the maintenance division. Of the total Department expenditures, 16 percent was used for maintenance. During this two-year period, \$8,532,520 was spent compared to the \$7,442,754 spent in 1959 and 1960 fiscal years.

For the first time in several years, flooding seriously damaged both primary and secondary routes. Cost of repair exceeded \$250,000 and caused several months' delay in the regular maintenance programs. Hardest hit was U. S. 40 in the Battle Mountain area where the Reese River cut that highway and SR 8A. Truck traffic diverted from the primary route during the flood period also caused extensive damage to sections of U. S. 50 between Fallon and Ely.

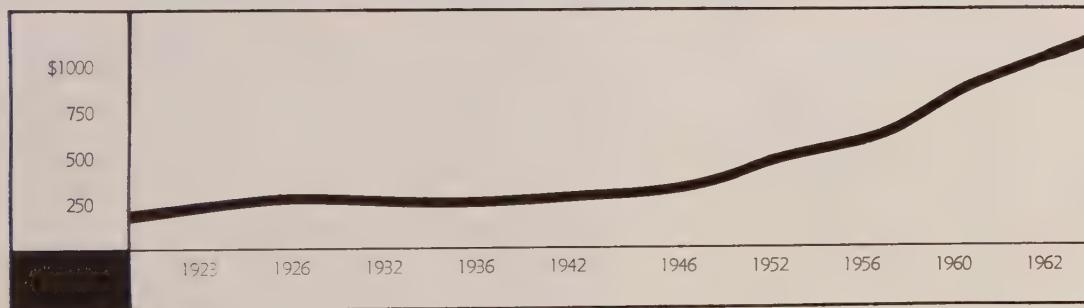
On the entire primary system, during the two years, maintenance forces resurfaced 165 miles, sealed and chipped 318 miles, sealed and sanded 125 miles and flush sealed 391 miles; on the Interstate system they sealed and chipped 20 miles; and on the secondary system crews resurfaced 44

miles, sealed and chipped 196 miles, sealed and sanded 103 miles, and flush sealed 350 miles.

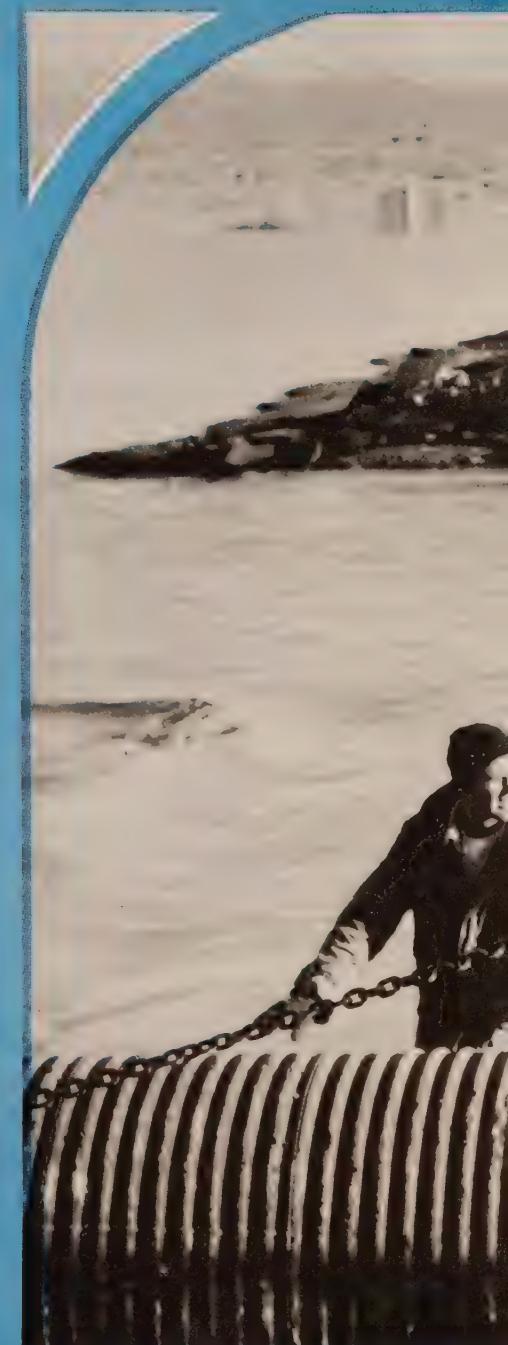
Maintenance costs rose from \$894 per mile in 1960 to \$1,158 per mile in 1962. As part of its program to increase efficiency and keep costs in line, the Department consolidated its maintenance facilities during the biennium.

Purchases of equipment during the two fiscal periods brought expenditures for this division to a record high. To handle the rapidly expanding highway program as efficiently as possible the maintenance fleet was increased in both numbers and work capacity of the units.

From July 1, 1960 to July 1, 1962, 242 units were purchased at a cost of \$970,296, to add to the 264 units acquired at a cost of \$1,118,000 in the 1959-60 period. Snow removal wasn't the problem this past biennium that it has been because the winters were relatively mild. However, the Department initiated the program of keeping the Mount Rose road to Lake Tahoe (State Route 27) open all year which required the purchase of special snow clearing equipment.

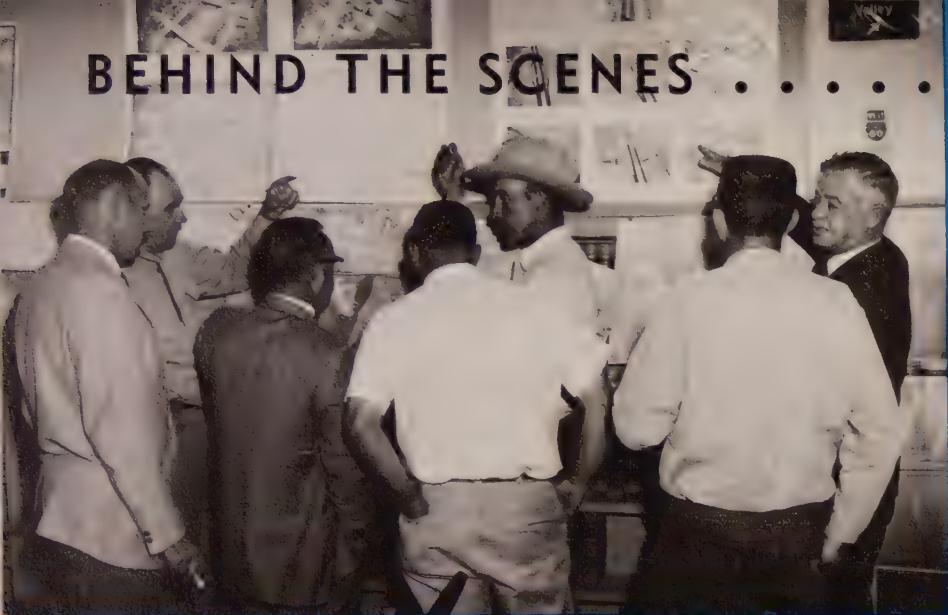


MAINTENANCE COST PER MILE





BEHIND THE SCENES



PUBLIC RELATIONS encompasses a program that includes public hearings, production and distribution of pamphlets and maps, preparation of exhibits, publication of reports and news releases on all phases of highway activity, answering tourist mail, and the preparation and distribution of the Highways and Parks magazine.



EQUIPMENT purchase and repair supervises the use and care of Department transportation and maintenance equipment, and the distribution of parts from a central stockroom. In 1962 plans were initiated to construct new equipment facilities in Sparks with completion of the project expected before 1964.



SIGN production is primarily a function of the sign shop which operates under the supervision of Equipment Superintendent Frank Quilici. Over 90 percent of the signs are made at the equipment yard in Reno by a seven-man crew under Foreman Harry Metzger. Over 5,000 signs were made during the 1961-62 period.



MAIL ROOM and files personnel under Margaret McDonald process, distribute, and file everything from postcards to engineer reports. Thousands of pieces of mail and hundreds of documents were handled by this section last biennium. Information on file dates back to the Department's first job in 1917.



COMMUNICATIONS control is handled from the radio central and repair office at District Two headquarters in Sparks. Communications facilities under Supervisor Joe Detting have expanded 20 percent since 1960. Mobile units, base stations, and relay facilities provided communication within each district and on a statewide basis.



ARCHITECT Jack Cooney and his assistant Arden Fialka are responsible for the design and construction of maintenance and roadside rest facilities throughout the state. During the past biennium new district offices were completed in Winnemucca and Sparks, and maintenance buildings were constructed at East Ely, Independence Valley, Bluejay, and Gold Hill.



OFFICE ENGINEER Stanley Sonden and his staff distributed notices, specifications, and plans for 42 contracts; issued over 15,000 permits and job authorizations; and recorded progress and completion of 31 contracts during the biennium. In addition as secretary of the Highway Board he noted the actions taken at nearly 100 meetings in the past two years.



LEGAL support for the Department is furnished by Highway Counsel Robert Potter and his three-man staff. To handle the greatly increased number of condemnation cases, two additional attorneys were hired on a fee basis during the past biennium period. In the two years over 100 such cases were filed in the process of acquiring needed right-of-way.

DISTRICT ONE



G. B. BROCKWAY
District Engineer

VERNON SHARP
Assistant District Engineer

MAINTENANCE STATIONS

LAS VEGAS
GLENDALE
ALAMO
BEATTY

INDIAN SPRINGS
MOUNTAIN SPRINGS
CHARLESTON
SEARCHLIGHT

OPERATIONS

Highway construction on all systems in District One showed an increase in the 1961-62 period over the previous biennium. On the Interstate system nine miles were completed at a cost of \$2,393,660 and an additional 19 miles costing \$5,284,200 were placed under contract. Ten miles of primary highway were finished at a cost of \$491,063 while another nine miles costing \$394,837 were still underway at the close of the biennium. On the secondary system, 4.7 miles were built for \$475,491, and an additional 14.8 miles costing \$1,432,331 were under construction as of June 30, 1962.

Maintaining the 735 miles of roadway within the district was the responsibility of the 85 employees operating from eight maintenance stations. In addition to normal road repair and cleanup, crews

Work on the freeway from Sloan to McCarran field was completed as the biennial period closed.



Charleston underpass in Las Vegas was widened to four lanes during biennium.

completed \$90,000 in major maintenance projects. During the same period, personnel maintained ten roadside rests, three of which were built during the past two years: Alamo on U. S. 93, Mountain Springs on FAS 538, and Springdale on U. S. 95. Despite an increase in mileage requiring maintenance, District One decreased its personnel from the high of 115 employed during the 1959-60 period.

Indicative of the growth of highway activity in southern Nevada was the transfer of right-of-way and testing personnel from Carson City to the District office in Las Vegas. This past biennial period set a new high for expenditures on road construction with over \$10,000,000 in jobs either completed or placed under contract. While emphasis was on the Interstate 15 freeway program, improvement was made on other systems, as well. Highlighting the past two years was the award of the largest secondary contract to date: reconstruction in the Alamo area of 14.8 miles of U. S. 93 at a record-setting cost of \$1,432,331.

DISTRICT TWO



JACK PARVIN
District Engineer

MICHAEL J. COLLETTI
Assistant District Engineer

MAINTENANCE STATIONS

SPARKS
NIXON
FERNLEY
FALLON
EASTGATE
PETERSON'S
GALENA CREEK
MOUNT ROSE

INCLINE
GOLD HILL
CARSON CITY
SPOONERS
YERINGTON
GARDNERVILLE
WELLINGTON



OPERATIONS

Over \$11,000,000 in highway jobs were completed or placed under contract in District Two during the 1961-62 biennial period. Projects involved over 21 miles of Interstate 80 freeway, nearly 40 miles of primary highway, and over 14 miles of secondary routes. Finished was a \$742,676 freeway bridge job, and still underway at the close of the biennium were an additional 21 miles of Interstate roadway costing \$5,717,598. At the same time over 36 miles of primary road were completed at a cost of \$3,429,657, while another 3.7 miles costing \$630,511 remained under construction. On the secondary system four miles costing \$155,724 were opened to traffic and an additional 10.2 miles at a cost of \$511,988 were placed under contract.

As in past years, District Two held its leadership in mileage and number employed, with 105 employees responsible for the maintenance of 940 miles of road and the operation of 15 stations. Despite this fact, the district was reduced in size over 10 percent from the 1959-60 period when 1,076 miles of roadway were maintained. Employment, too, was down nearly 10 percent. Most of this reduction resulted from the reorganization of the maintenance areas and the establishment of a new district in mid-1960.

However, this reduction in size was accompanied by an increase in maintenance activity in 1961 and 1962. Prominent accomplishments included the completion of the new District Two office in Sparks at a cost of \$199,900 and the installation of a new \$52,988 station at Gold Hill replacing an antiquated facility in Virginia City. At the same time fall storms caused severe flash flood damage on U. S. 40 and U. S. 50, requiring the expenditure of over \$100,000 for repair and reconstruction. In all, nearly 340 miles of primary highway and over 90 miles of secondary road were involved in the sealing, sanding, chipping, and resurfacing operations completed in District Two during the past two fiscal years.

Prestressed concrete beams were used for the first time in northern Nevada in building the freeway bridges over the Truckee river east of Reno.



DISTRICT THREE



PAUL E. ROBBINS
District Engineer

HENRY H. MAYER
Assistant District Engineer

MAINTENANCE STATIONS

ELKO
EMIGRANT PASS
PINE VALLEY
CURRIE
FERGUSON SPRINGS
PEQUOP
WELLS

CONTACT
DEETH
INDEPENDENCE VALLEY
NORTH FORK
MOUNTAIN CITY
RUBY VALLEY



Over 25 miles of new secondary highway were completed in the eastern end of the district with the construction of State Route 30 to Montello.

Largest single job to be awarded during the biennial period was let for contract in the Elko district. Construction of an 11.9 mile section of Interstate 80 was begun from Halleck west at a cost of \$3,530,530. This freeway project was the first for this area since the state's initial Interstate job was completed over Pequop summit in 1957. Between July 1, 1960 and July 1, 1962, the district also supervised the completion or award of primary contracts totaling 25.7 miles and \$1,733,111, and of secondary projects calling for construction of 29.5 miles of roadway costing \$971,761.

During the same period, an average of 75 employees handled the maintenance of over 722 miles of highway scattered throughout Elko, Eureka and Lander counties. The operation required personnel and equipment from 13 stations. Mileage, personnel, and facilities were reduced considerably over the previous biennium. In 1959 and 1960, an average of 81 employees were responsible for maintaining 959 miles of road and operating 15 stations. This reduction in forces was due primarily to the establishment of the new Winnemucca district in July 1960 from former portions

DISTRICT

of Districts Two and Three. However, to accommodate the growing gap between mileage and the personnel to maintain it, the maintenance sections were reorganized and a new station constructed on State Route 11 in Independence Valley north of Elko.

While the Department was improving the highway system with new construction, District Three was making driving more attractive with the expansion of its roadside rest facilities. During the past two years, four new rests were completed, adding to the ten already in operation. The additions were constructed on U. S. 93, north of Wells, and on U. S. 40 on the westside of Moor summit, east of Pequop summit and near the entrance to the Pequop maintenance station.



Reconstruction of U.S. 93 from Contact to the Idaho line was nearing completion at the close of the biennium. The \$1,133,307 job was the largest primary project under contract in the district during the past two-year period.

OPERATIONS . . .



Major project in the district during the 1961-62 period was the reconstruction of U.S. 6 over Murry summit to Ely. The \$832,333 job opened to traffic in September 1962.

With the close of the biennium, District Four completed a record period of highway activity. As of July 1, 1962, the Ely area led all other districts in the state in primary road construction. During the last two years, 46.5 miles of primary road were completed at a cost of \$2,079,731, and an additional 6.5 miles costing \$832,333 placed under contract. At the same time, work was begun on a 24-mile secondary job costing \$616,196.

The maintenance program was equally active with over 150 miles of highway receiving major repairs. The extensive sealing, chipping, and resurfacing operations cost \$180,000. Much of the maintenance was required to repair damage from the flash floods in August and September of 1961 and the diversion of heavy truck traffic to U. S. 50 during the flooding of U. S. 40 in the Battle Mountain area in February 1962.

During the biennial period an average of 61 were employed to handle district activity that was spread over 743 miles of highway. The eight maintenance stations involved were responsible for primary and secondary routes extending from Utah on the east to the Lander-Eureka line on the west, and from Elko County border on the north to Pahroc summit on the south. To more adequately handle this widespread program, improvement in maintenance facilities was made at Geyser, Schellbourne, and at East Ely.

In addition to keeping the highways in driving condition, district forces operated 11 roadside rests, five of which were constructed during the last two years.



Underway as the biennium closed was the construction of 24 miles of secondary road from U. S. 50 north to Strawberry in western White Pine county.

DISTRICT FOUR



J. A. GLOCK
District Engineer

OWEN JOSEPH
Assistant District Engineer

MAINTENANCE STATIONS

EAST ELY
EUREKA
SCHELLBOURNE
BAKER

GEYSER
CURRENT
PIOCHE
CALIENTE

DISTRICT FIVE



C. L. BROWN
District Engineer

MAINTENANCE STATIONS

TONOPAH
GOLDFIELD
HAWTHORNE
MINA
MONTGOMERY PASS

FISH LAKE VALLEY
CARVERS
AUSTIN
BLUE JAY
DIABLO

Highway contracts totaling nearly 75 miles and costing over \$4,630,000 established the 1959-1960 biennium as a record period for District Five. Twenty-five miles of primary road costing \$2,637,267 and eight miles of secondary highway costing \$143,578 were completed during the two years. At the close of the biennial period, the Tonopah area led all other districts in primary and secondary work underway with 41 miles of roadway being constructed at a cost of \$1,852,685.

At the same time, 65 employees handled maintenance on 857 miles of road extending from north of Austin to south of Goldfield and from Walker Lake to west of Alamo. In addition to managing routine road work, crews from the district's ten stations completed over \$164,000 in major maintenance projects, sealing, chipping or repaving 267 miles of state highway. The roadside rest program was expanded during the same period with the construction of four new sites, bringing to ten the total rest areas now available in the district.

Although mileage in the district was increased over the previous biennium, the average number of employees remained the same and the number of maintenance stations was decreased by two. This reduction in facilities and increase in work load was made possible by several changes in the maintenance operation, including the use of a

DISTRICT



Most spectacular job in the state was completed in this district in 1961 with the reconstruction of U.S. 95 along the cliffs of the west side of Walker lake.

swing shift crew. The station location on U. S. 6 between Warm Springs and Currant also was changed. Construction was begun on a new facility to be located south of the existing one and designed to replace it.



Another major section of U. S. 95 was improved with the rebuilding of the route from 26 to 43 miles north of Beatty. Work was nearing completion at the end of the biennial period.

OPERATIONS

Newest of the districts, District Six established a construction record this past biennial period that has never been equalled. Although organized only two years ago, this area passed all others in mileage placed under contract and money expended for new construction. As of July 1, 1962, 18.4 miles of Interstate 80 freeway had been built at a cost of \$4,390,828 with another 25.2 miles costing \$4,732,110 still underway. At the same time 29 miles of primary highway and 24 miles of secondary roadway were constructed for \$1,189,038, and \$624,124, respectively. In addition, 20.7 miles of secondary routes costing \$987,398 were under construction at the close of the biennium.

The nearly 12 million dollars worth of contracts called for building over 117 miles of new highway and included the state's largest job to date, the Golconda freeway. This 12.6 mile Interstate 80 project over Golconda summit east of Winnemucca cost \$3,694,174, and was open to traffic in October 1961.



Additional miles of freeway were opened to traffic in the southwestern section of the district with the completion of Interstate 80 in the 20-Mile Hill area.



Largest contract in the Department's history was completed in the district during the biennium. The \$3,690,000 job resulted in the construction of 12.6 miles of Interstate 80 freeway over Golconda summit east of Winnemucca.

The district encompasses 537 miles of highway, 293 miles on the secondary system, 226 miles on the primary, and 18 on the Interstate. An average of 48 were employed at the six maintenance stations and headquarters office in the district. Over half of the employees were stationed at Winnemucca where headquarters facilities were constructed during the biennium.

In the past two years, maintainers worked on nearly 280 miles of roadway in a program that included sealing, chipping, and sanding. In addition they maintained nine roadside rest, two of which were built during the two-year period.

DISTRICT SIX



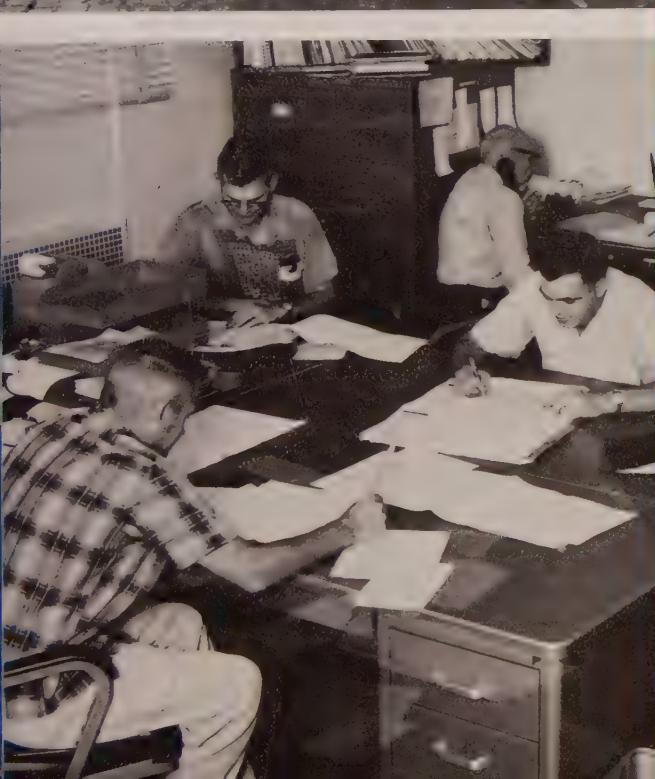
DALE V. ROSE
District Engineer

A. A. HOWARD
Assistant District Engineer

MAINTENANCE STATIONS

WINNEMUCCA
QUINN RIVER
IMLAY

LOVELOCK
BATTLE MOUNTAIN
OROVADA



BUILDING FOR THE FUTURE

GROWTH of the Highway Department is a necessity to effectively handle projects already programmed. Within the next decade highway activity is expected to double in quantity and in requirements for personnel and equipment. Expenditures in the next ten years will equal or surpass the amount spent by the Department from its formation in 1917 to date.

Over 590 miles of new highway, costing nearly \$140,000,000, is already on the design board. Of this total, \$103,600,000 has been set up for constructing 147 miles of Interstate freeway, \$24,600,000 for building 248 miles of primary highway, and \$10,800,000 for the completion of 196 miles of secondary roads. Add to this another 260 miles of Interstate freeway costing \$80,000,000, which is scheduled for construction by 1972 and the need for growth is apparent.

Field work in the upcoming road program will require a personnel increase in the divisions of design, right-of-way, survey and location, and testing. At the same time as the highway system is expanded and more multi-lane mileage completed, additional maintenance equipment, stations, and maintainers will be required. The present 2,500-mile limit set on the secondary program is inadequate and plans are being made to expand it. By 1968, it is anticipated 450 more miles of secondary highway will have been constructed or placed under contract.

In the design stage is the relocation of U.S. 50 west of Austin and U.S. 93 south of Alamo, both major multi-million dollar projects. Plan-

ning is underway on the new location and four-lane construction of U.S. 50 at the south end of Lake Tahoe and on the complete reconstruction of U.S. 95 from Schurz to Fallon and U.S. 95 Alternate from Yerington to Silver Springs.

Expansion of highway capabilities will require new buildings. Within the next ten years, an estimated \$5,000,000 in new physical facilities will be needed. Crowded conditions at highway headquarters in Carson City and inadequate storage and working space at the equipment yard in Reno will be remedied in the next two or three years with the construction of new office and shop buildings. At the close of the biennium architects were completing plans for these additions which will cost an estimated \$2,500,000 to construct.

As the highway program continues to grow, more decentralization of headquarters personnel and equipment will be needed for efficient operation. A move in this direction has begun with the shift during the past biennial period of testing and right-of-way personnel from Carson to Las Vegas. Further expansion of facilities in southern Nevada will be required in the future.

The demands of the motorist make it impossible for the Department to limit its progress, to feel it has made the last change, the final improvement. The goal of the highway program must continue to be that of providing the driving public with the best possible roads, when they are needed and where they are needed.

OUR PROGRESS TODAY AND TOMORROW

FREEWAYS

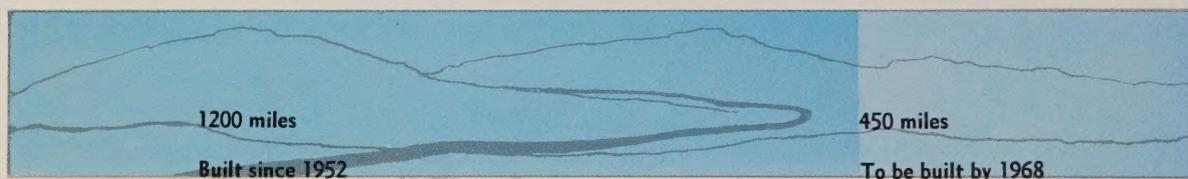


COST

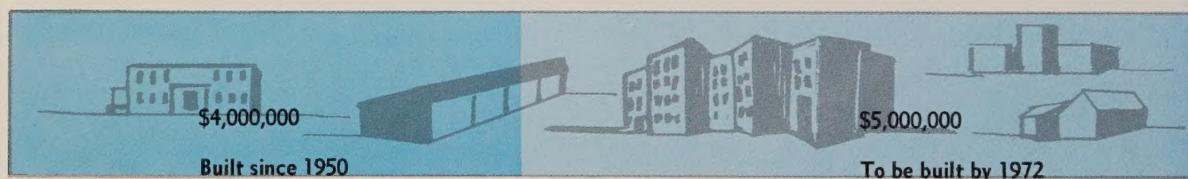
PRIMARIES



SECONDARIES



BUILDINGS



\$184,000,000

\$50,000,000

\$32,000,000

\$5,000,000

ADMINISTRATIVE OFFICIALS

Board of Directors

GRANT SAWYER, Governor
Chairman

ROGER FOLEY, Attorney General
Member

KEITH LEE, Controller
Member

Department Heads

W. O. WRIGHT
State Highway Engineer

R. E. ELDREDGE
Deputy Highway Engineer

JOHN E. BAWDEN
Deputy Highway Engineer

Division Heads

A. G. KINNE
Assistant Deputy Highway Engineer

D. H. HAYS
Administrative Engineer

O. W. WALKER
Chief Road Designer

E. T. BOARDMAN
Chief Bridge Designer

ORVIS REIL
Chief Planning Survey Engineer

JAMES T. WALLACE
Chief Right of Way Engineer

ROBERT J. POTTER
Chief Counsel

FRANK QUILICI
Highway Equipment Superintendent

VICTOR W. CLYDE
Construction Engineer

H. A. SQUIRES
Maintenance Engineer

L. W. LITTLE
Chief Testing Engineer

F. H. MORRISON
Research Engineer

W. H. GIBSON
Location Engineer

RALPH J. OTTINI
Traffic Engineer

STANLEY D. SUNDEEN
Office Engineer

HENRY L. CLAYTON
Personnel Officer

CLARENCE S. EICHE
Chief Accountant

DONALD L. BOWERS
Public Information Officer

JOSEPH A. MOORE
Safety Director

District Engineers

G. B. BROCKWAY
District Engineer
District One, Las Vegas

VERNON SHARP
Assistant District Engineer
District One, Las Vegas

JACK PARVIN
District Engineer
District Two, Reno

MICHAEL J. COLLETTI
Assistant District Engineer
District Two, Reno

PAUL E. ROBBINS
District Engineer
District Three, Elko

HENRY H. MAYER
Assistant District Engineer
District Three, Elko

J. A. GLOCK
District Engineer
District Four, Ely

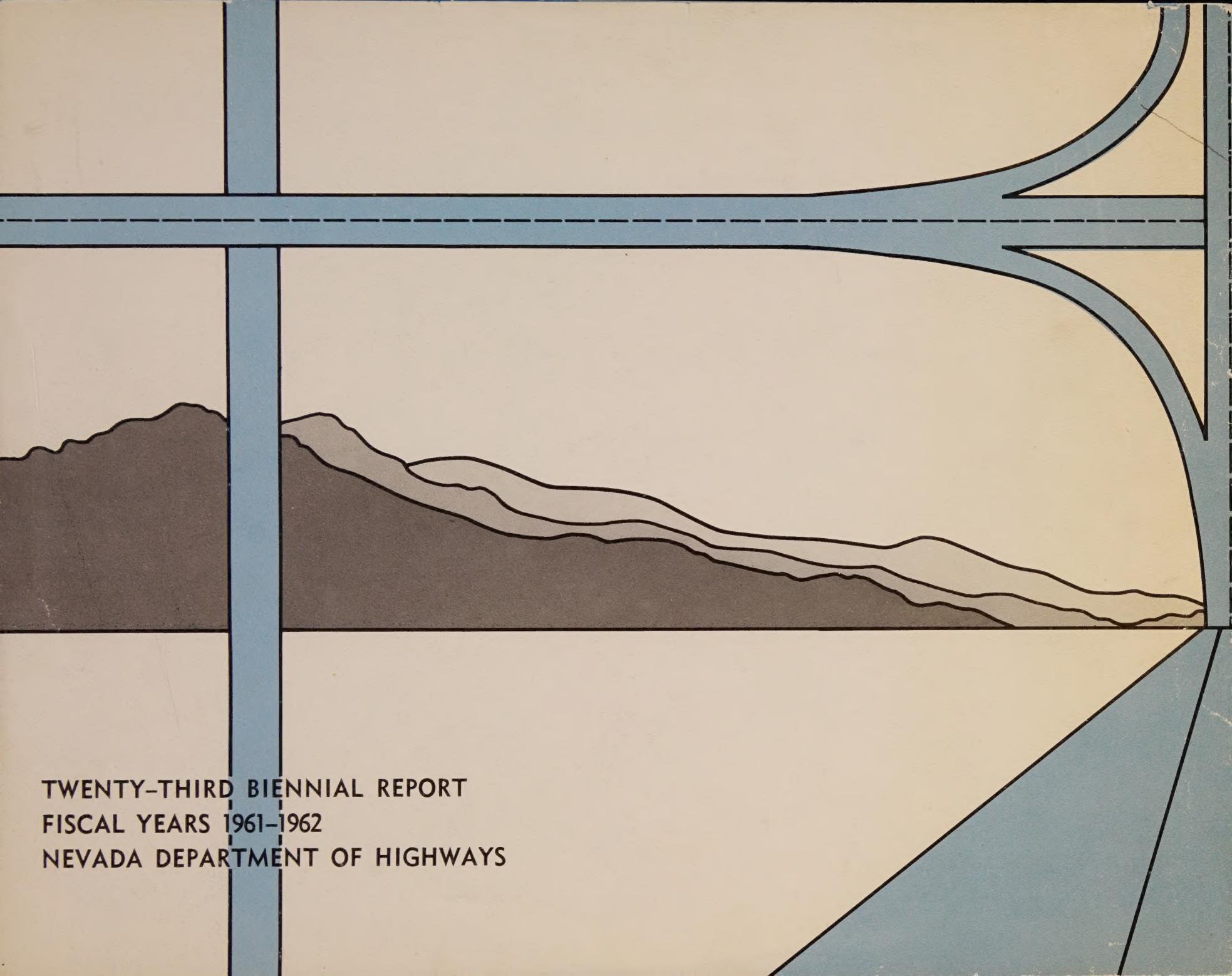
OWEN JOSEPH
Assistant District Engineer
District Four, Ely

C. L. BROWN
District Engineer
District Five, Tonopah

DALE V. ROSE
District Engineer
District Six, Winnemucca

A. A. HOWARD
Assistant District Engineer
District Six, Winnemucca





The background of the cover features a stylized graphic of a landscape. It includes a dark brown mountain range on the left, a winding blue river or highway in the center, and a light beige area representing a plain or valley. A blue bridge arches over the river. The design is composed of simple black outlines on a light beige background.

**TWENTY-THIRD BIENNIAL REPORT
FISCAL YEARS 1961-1962
NEVADA DEPARTMENT OF HIGHWAYS**